Cluster Statement		Standard	Keep or Propose Change	Change: Removed, Re-written, Broken Up	Quality Standards Rule #	Reason for Proposed Change
Experiment with transformations in the plane.	G.CO.1	G.CO.1 ~~Know~~ State and apply precise definitions of angle, circle, perpendicular ~~line~~, parallel ~~line~~, ray, ~~and~~ line segment, and distance based on the undefined notions of point, line, and plane. ~~distance along a line, and distance around a circular arc.~~	Change	Re-written	1, 2	Improve the clarity of the standard and use a measurable verb
Experiment with transformations in the plane.	G.CO.2	G.CO.2 Represent transformations in the plane. ~~using~~ (e.g., using transparencies and/or geometry software); a. Describe transformations as functions that take points in the plane as inputs and give other points as outputs. b. Compare transformations that preserve distance and angle to those that do not (e.g., translation versus ~~horizontal stretch~~ dilation).	Change	Re-written	1	Improve clarity and vocabulary use
Experiment with transformations in the plane.	G.CO.3	G.CO.3 Given a rectangle, parallelogram, trapezoid, or regular polygon, describe the rotations and/or reflections that ~~carry~~ map ~~it~~ the figure onto itself.	Change	Re-written	1	Improve clarity and vocabulary use
Experiment with transformations in the plane.	G.CO.4	G.CO.4 Develop definitions of rotations, reflections, and translations in terms of angles, circles, perpendicular lines, parallel lines, and line segments.	Keep			
Experiment with transformations in the plane.	G.CO.5	G.CO.5 Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure ~~using~~, (e.g., using graph paper, tracing paper, or geometry software). Specify a sequence of transformations that will ~~carry~~ map a given figure onto another.	Change	Re-written	1	Improve clarity and vocabulary use

Understand congruence in terms of rigid motions.	G.CO.6	G.CO.6 Use geometric descriptions of rigid motions to transform figures. ~~and to~~ a. Predict the effect of a given rigid motion on a given figure b. ~~; g~~Given two figures, use the definition of congruence in terms of rigid motions to decide if they are congruent.	Change	Re-written	1	Improve clarity
Understand congruence in terms of rigid motions.	G.CO.7	G.CO.7 Use the definition of congruence in terms of rigid motions to show that two triangles are congruent if and only if corresponding pairs of sides and corresponding pairs of angles are congruent.	Keep			
Understand congruence in terms of rigid motions.	G.CO.8	G.CO.8 Explain how the criteria for triangle congruence (ASA, SAS, and SSS) follow from the definition of congruence in terms of rigid motions.	Keep			
Prove geometric theorems.	G.CO.9	G.CO.9 Prove theorems about lines and angles.Theorems must include but not limited to: vertical angles are congruent; when a transversal ~~crosses~~ intersects parallel lines, alternate interior angles are congruent and ~~corresponding angles are congruent~~ same side interior angles are supplementary (using corresponding angles postulate); points on a perpendicular bisector of a line segment are ~~exactly those~~ equidistant from the segment's endpoints.	Change	Re-written	1	Improve clarity and vocabulary use
Prove geometric theorems.	G.CO.10	G.CO.10 Prove congruence theorems about triangles.Theorems must include but not limited to: measures of interior angles of a triangle sum to 180°; base angles of isosceles triangles are congruent; the ~~segment joining midpoints of two sides of a~~ midsegment of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point.	Change	Re-written	1	Improve clarity and vocabulary use

Prove geometric theorems.	G.CO.11	G.CO.11 Prove theorems about parallelograms. Theorems must include but not limited to: opposite sides are congruent, opposite angles are congruent, the diagonals of a parallelogram bisect each other, and conversely, rectangles are parallelograms with congruent diagonals.	Change	Re-written	1	Improve clarity of expectations
Make geometric constructions.	G.CO.12	G.CO.12 Perform ~~Make formal~~ geometric constructions with a ~~variety of tools and methods (~~compass and straightedge~~, string, reflective devices, paper folding, dynamic geometric software, etc.~~). including copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines/segments~~, including the perpendicular bisector of a line segment~~; ~~and~~ constructing a line parallel to a given line through a point not on the line.	Change	Re-written	4	Removing teacher actions
Make geometric constructions.	G.CO.13	G.CO.13 Construct an equilateral triangle, a square, and a regular hexagon ~~inscribed in a circle.~~	Change	Re-written	1	Clarity
Understand similarity in terms of similarity transformations.	G.SRT.1	G.SRT.1 Verify experimentally and apply the properties of dilations ~~given~~ as determined by a center and a scale factor: ~~1a. A dilation takes a line not passing through the center of the dilation to a parallel line, and leaves a line passing through the center unchanged.~~ ~~1b. The dilation of a line segment is longer or shorter in the ratio given by the scale factor.~~	Change	Re-written	1	Maintained the intent of the standard, but reworded for better understanding
Understand similarity in terms of similarity transformations.	G.SRT.2	G.SRT.2 Determine whether ~~Given~~ ~~two~~ figures are similar~~, use~~ using the definition of similarity~~ in terms of similarity transformations to decide if they are similar;~~ and ~~explain~~ using similarity transformations. ~~the meaning of similarity for triangles as the equality of all corresponding pairs of angles and the proportionality of all corresponding pairs of sides.~~	Changed	Re-written	1	Kept the same intent of the standard, but reworded for clarity

Understand similarity in terms of similarity transformations.	G.SRT.3	G.SRT.3 Use the properties of similarity transformations to establish similarity theorems. Theorems must include AA, SAS, and SSS. ~~the AA criterion for two triangles to be similar.~~	Changed	Re-written	1,2	Mentioning AA was too limiting. SAS and SSS was added to be more inclusive
Prove theorems involving similarity.	G.SRT.4	G.SRT.4 Prove theorems about triangles involving similarity. Theorems must include but not limited to: a line parallel to one side of a triangle divides the other two proportionally, and its converse~~ly~~; the Pythagorean Theorem proved using triangle similarity.	changed	re-written	1,2	
Prove theorems involving similarity.	G.SRT.5	G.SRT.5 Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.	keep			
Define trigonometric ratios and solve problems involving right triangles.	G.SRT.6	G.SRT.6 ~~Understand that by~~ Define, using similarity, that side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios (sine, cosine, and tangent) for acute angles.	changed	rewritten	1	clarify the trig ratios that are defined in the geometry course; change to a measurable verb
Define trigonometric ratios and solve problems involving right triangles.	G.SRT.7	G.SRT.7 Explain and use the relationship between the sine and cosine of complementary angles.	keep			

Define trigonometric ratios and solve problems involving right triangles.	G.SRT.8	G.SRT.8 Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems. (Uses Modeling)	keep			
(+) Apply trigonometry to general triangles.	G.SRT.9	~~G.SRT.9 (+) Derive the formula A = 1/2 ab sin(C) for the area of a triangle by drawing an auxiliary line from a vertex perpendicular to the opposite side.~~	Keep as Plus Standard - Moved to 4th Year			
(+) Apply trigonometry to general triangles.	G.SRT.10	~~G.SRT.10 (+) Prove the Laws of Sines and Cosines and use them to solve problems.~~	Keep as Plus Standard - Moved to 4th Year			
(+) Apply trigonometry to general triangles.	G.SRT.11	~~G.SRT.11 (+) Understand and apply the Law of Sines and the Law of Cosines to find unknown measurements in right and non-right triangles (e.g., surveying problems, resultant forces).~~	Keep as Plus Standard - Moved to 4th Year			
Understand and apply theorems about circles.	G.C.1	G.C.1 Prove that all circles are similar.	keep			
Understand and apply theorems about circles.	G.C.2	G.C.2 Identify and describe relationships among central angles, inscribed angles, circumscribed angles, radii, and chords. ~~*Include the relationship between central, inscribed, and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle.*~~	changed	re-written	1	changed to include all relevant angles in the stem of the standard

Understand and apply theorems about circles.	G.C.3	G.C.3 Construct, using a compass and straight edge, the inscribed and circumscribed circles of a triangle, and prove properties of angles for a quadrilateral inscribed in a circle.	changed	re-written	1	clarified the type of construction
Understand and apply theorems about circles.	G.C.4	G.C.4 (+) Construct a tangent line from a point outside a given circle to the circle.	keep			
Find arc lengths and areas of sectors of circles.	G.C.5	G.C.5 Derive using similarity ~~the fact that~~ the length of the arc intercepted by an angle is proportional to the radius.~~and~~ 5a. Define the radian measure of the angle as the constant of proportionality; 5b. Derive and apply the formula for the area of a sector.	changed	re-written	1	Divided the standard into two parts to make both parts uniquely measurable
Translate between the geometric description and the equation for a conic section.	G.GPE .1	G.GPE.1 Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation.	keep			
Translate between the geometric description and the equation for a conic section.	G.GPE .2	~~G.GPE.2 Derive the equation of a parabola given a focus and directrix.~~	Move to 4th year			This is not a plus standard. Assessments should reflect this change

Use coordinates to prove simple geometric theorems algebraically.	G.GPE.4	G.GPE.4 Use coordinates to prove ~~simple~~ geometric ~~theorems~~ relationships algebraically. *For example, ~~prove or disprove~~ determine whether ~~that~~ a figure defined by four given points in the coordinate plane is a rectangle; ~~prove or disprove~~ determine whether ~~that~~ the point (1, √3) lies on the circle centered at the origin and containing the point (0, 2).*	changed	re-written	1	theorems didn't seem like the right word
Use coordinates to prove simple geometric theorems algebraically.	G.GPE.5	G.GPE.5 ~~Prove~~ Define and use the slope criteria for parallel and perpendicular lines. ~~and use them to solve geometric problems~~ (e.g., find the equation of a line parallel or perpendicular to a given line that passes through a given point).	changed	re-written	1	we didn't feel prove was the intent of the standard
Use coordinates to prove simple geometric theorems algebraically.	G.GPE.6	G.GPE.6 Find the point on a directed line segment between two given points that partitions the segment in a given ratio. e.g. Determine the point(s) that divide the segment with endpoints of (-4, 7) and (6, 3) into the ratio 2:3	changed	re-written	1	we felt the example was neccessary to ensure this was not interpreted as just the midpoint of the segment
Use coordinates to prove simple geometric theorems algebraically.	G.GPE.7	G.GPE.7 Use coordinates to compute perimeters of polygons and areas of triangles and rectangles, e.g., using the distance formula. (Uses Modeling)	keep			

Explain volume and surface area formulas and use them to solve problems.	G.GMD.1	G.GMD.1 Give an informal argument for the formulas for the ~~circumference of a circle, area of a circle,~~ volume of a cylinder, pyramid, sphere, and cone. *Use dissection arguments, ~~Cavalieri's principle~~ , and informal limit arguments.*	change			circumference of a circle and area of a circle are 7th grade standards
Explain volume and surface area formulas and use them to solve problems.	G.GMD.2	G.GMD.2 (+) Give an informal argument using Cavalieri's principle for the formulas for the volume of a sphere and other solid figures	keep			
Explain volume and surface area formulas and use them to solve problems.	G.GMD.3	G.GMD.3 Know and apply ~~Use~~ volume and surface area formulas for cylinders, pyramids, cones, and spheres for composite figures to solve problems. (Uses Modeling)	change	re-written	2	changed to incomposite to
Visualize relationships between two-dimensional and three-dimensional objects.	G.GMD.4	G.GMD.4 Identify ~~the shapes of~~ two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.	change	re-written	1	eliminated the redundancy

Apply geometric concepts in modeling situations.	G.MG.1	G.MG.1 Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder). (Uses Modeling)	keep			
Apply geometric concepts in modeling situations.	G.MG.2	G.MG.2 Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, BTUs per cubic foot). (Uses Modeling)	keep			
Apply geometric concepts in modeling situations.	G.MG.3	G.MG.3 Apply ~~geometric methods~~ geometric concepts to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios). (Uses Modeling)	change	re-written	1	improve clarity and allow for flexibility
Understand independence and conditional probability and use them to interpret data.	S.CP.1	S.CP.1 Describe events as subsets of a sample space ~~(the set of outcomes) using characteristics (or categories) of the outcomes,~~ or as unions, intersections, or complements of other events ~~("or," "and," "not")~~.	change	re-written	1	Improve clarity
Understand independence and conditional probability and use them to interpret data.	S.CP.2	S.CP.2 Determine whether ~~Understand that~~ two events A and B are independent. ~~if the probability of A and B occurring together is the product of their probabilities, and use this characterization to determine if they are independent.~~	Change	re-written	1	Improve clarity

Understand independence and conditional probability and use them to interpret data.	S.CP.3	S.CP.3 Determine ~~Understand the~~ conditional probability~~ies of A given B as P(A and B)/P(B),~~ and interpret independence by analyzing ~~of A and B as saying that the~~ conditional probability ~~of A given B is the same as the probability of A, and the conditional probability of B given A is the same as the probability of B.~~	change	re-written	1	We think the explanation of the process belongs in the disaggregated standards document
Understand independence and conditional probability and use them to interpret data.	S.CP.4	S.CP.4 Construct and interpret two-way frequency tables of data ~~when two categories are associated with each object being classified~~. Use the two-way table as a sample space to decide if events are independent and to approximate conditional probabilities. *For example, collect data from a random sample of students in your school on their favorite subject among math, science, and English. Estimate the probability that a randomly selected student from your school will favor science given that the student is in tenth grade. Do the same for other subjects and compare the results.*	change	re-written	1	redundant information eliminated
Understand independence and conditional probability and use them to interpret data.	S.CP.5	S.CP.5 Recognize and explain the concepts of conditional probability and independence in everyday language and ~~everyday~~ situations. *For example, compare the chance of having lung cancer if you are a smoker with the chance of being a smoker if you have lung cancer.*	change	re-written	1	improve language

Use the rules of probability to compute probabilities of compound events in a uniform probability model.	S.CP.6	S.CP.6 Find the conditional probability of A given B as the fraction of B's outcomes that also belong to A, and interpret the ~~answer~~ result. ~~in terms of the model.~~	change	re-written	1	added an example to understand the terminology "model"
Use the rules of probability to compute probabilities of compound events in a uniform probability model.	S.CP.7	S.CP.7 Apply the Addition Rule, P(A or B) ~~= P(A) + P(B) – P(A and B)~~, and interpret the result. ~~answer in terms of the model.~~	change	re-written	1	changed to be consistent with changes in the other standards
Use the rules of probability to compute probabilities of compound events in a uniform probability model.	S.CP.8	S.CP.8 ~~(+)~~ Apply the general Multiplication Rule ~~in a uniform probability model~~, P(A and B) ~~= P(A)P(B|A) = P(B)P(A|B)~~, and interpret the result. ~~answer in terms of the model.~~	change	re-written	1	changed to be consistent with changes in the other standards

Use the rules of probability to compute probabilities of compound events in a uniform probability model.	S.CP.9	~~S.CP.9 (+) Use permutations and combinations to compute probabilities of compound events and solve problems.~~	Plus standard moved to 4th year			
(+) Use probability to evaluate outcomes of decisions.	S.MD.6	~~S.MD.6 (+) Use probabilities to make fair decisions (e.g., drawing by lots, using a random number generator).~~	Plus standard moved to 4th year			
(+) Use probability to evaluate outcomes of decisions.	S.MD.7	~~S.MD.7 (+) Analyze decisions and strategies using probability concepts (e.g., product testing, medical testing, pulling a hockey goalie at the end of a game).~~	Plus standard moved to 4th year			